

AbstractLOCAL COMMUNICATION SYSTEM

5 Examples of local communication systems are disclosed, based on a ring of point-to-point links, providing for transport of fixed rate synchronous, fixed rate asynchronous data and variable rate data in a flexible format. Different segments of the ring network can carry data at different bit rates, while remaining synchronised to a common frame rate and having a common control channel structure, for compatibility
10 with earlier systems. Parallel channels are provided, either permanently or when required, for signalling errors of source data, data validity/padding, flow control. Parallel variable width channels are defined with free content (stream or packet). Null data symbols are defined for padding on a byte-by-byte basis. The allocation of capacity among variable width channels is revised block by block, and a transition
15 period is defined to allow for ring latency. Calculations for allocation of capacity are performed during one block for the next block, locally at each source station, according to predetermined rules. Information as to bandwidth requirements is exchanged prior to the calculation via a special connection signalling channel and message format.

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(Fig.12)